Daily Times
Trending: Kashmir Coronavirus Your right to know ePaper
HOME LATEST PAKISTAN WORLD EDITORIALS & OPINIONS BUSINESS SPORTS ARTS, CULTURE & BOOKS LIFESTYLE E-PAPER

JULY 11, 2021

Muslims' contributions to scientific thinking

Zafarullah Khan

Islam contributed enormously to humanity through advancements in all fields of learning. In addition to original intellectual breakthroughs, Islamic scholars preserved most of the important scientific and philosophical texts of ancient Greece in Arabic translations. Within the framework of Greek knowledge, Muslims intellectuals made several important contributions that continued into the Roman Era. The translation of most works by Muslims into Latin during the 12th and 13th centuries played a pivotal role in the awakening of the European Renaissance. The 12th century witnessed an intensified transfer of Muslim learning into the West through translations of Muslim works, which helped Europe seize the initiative from Islam, when the conditions deteriorated in the Islamic world. According to American historian and philosopher, Will Durant (1993):

'For five centuries, from 700 to 1200, Islam led the world in power, order and extent of government, in refinement of manners, scholarship and philosophy'.

The contributions of Islam and Muslims on human civilization can be divided into the two areas of moral, (discussed in last article) and intellectual impact (being discussed now). Islam propagated a scientific method of thinking. Scientific thinking means the application of a disciplined manner of inquiry, which is based on objective and systematic methods; it is used to facilitate and generate new bodies of knowledge. It is an organized method of inquiry that is inspired by reflection and engagement in careful observation of the nature. Divine wisdom guides the Quranic inspiration for knowledge inquiry. The holy Quran initiated the Islamic mission by invitation for reconstruction of the paradigm as follows: Read by the name of your Lord who created. (Quran 96:1)

This very revelation declares that the study of the entire created world is a basic method to appreciate the Creator. This new Islamic approach towards nature provided Muslims the innovative power of creative insights in the exploration of nature. The Quran not only inspires human intellect to gain deep insights in natural phenomena, it also provides various thinking styles and different

modes of reasoning. From the point of view of the Quran, nature is a clear sign of God (Ayah) that presents the systematic order created by Allah:

Behold! in the creation of the heavens and the earth; in the alternation of the night and the day; in the sailing of the ships through the ocean for the profit of mankind; in the rain which Allah sends down from the skies, and the life which He gives therewith to an earth that is dead; in the beasts of all kinds that He scatters through the earth; in the change of the winds, and the clouds which shown between the sky and the earth; all these are indeed Signs for people of thought. (Quran 2:164)

'Can the blind be held equal to the seeing? Will ye then consider not?' (Quran 6:50)

Do you not understand? (Quran 2:44)

Do they not look at the Camel how it is made? And at the Sky how it is raised up? And at the Mountains how they are fixed firm? And at the Earth how it is spread out? (Quran 88:17-20)

The curiosity created by the Quran forced the early Muslim intellectuals to practice creative thinking in its true sense. This practice transpired in the original works they produced and the translation and preservation of the ancient scientific heritage of Greek, Indian and Persian civilizations. Their endeavors resulted in two significant creative processes that contributed immensely to the future developments of mankind: the invention of advanced technologies and the nurturing of creative and analytical minds.

The Muslims welcomed, appreciated and assimilated the positive and creative contributions of all nations, then critically examined and integrated these ideas into the framework of the Islamic worldview. Phillip Hitti notes:

'The Islamic ability to reconcile monotheism and science proofs to be a first time in human thought that theology, philosophy, and science were finally harmonized in a unified whole. Thus, their contribution was one of the first magnitude, considering its effect upon scientific and philosophic thought and upon the theology of later times. One of the reasons for such development of science is probably due to God's commandments to explore the laws of nature'.

JULY 11, 2021

Before the advent of Islam, people worshipped objects of nature and this was called Shirk (associating others with God). Islam urged its followers not to worship objects of nature, but rather to study it. This led to scientific thinking and processes. Before Islam, there was no formal concept of experimentation and observation. The universe was an object of worship for man, rather than an object of investigation. It was this great scientific contribution of Islam that completely changed the history of mankind on earth. To quote Encyclopedia Britannica in this context:

'A widespread phenomenon in religions is the identification of natural forces and objects as divinities. It is convenient to classify them as celestial, atmospheric and earthly. This classification itself is explicitly recognized in Indo-Aryan religion: Surya, the sun god, is celestial; Indra, associated with storms, rain and battles, is atmospheric; and Agni, the fire god, operates primarily at the earthly level'.

Islam gave the scientific method to the world. Before Islam, people believed in ancient traditional knowledge without subjecting it to experimentation. The renowned British thinker and philosopher, Bertrand Russell remarked that the Greeks were against experimentation and observation. In his book The Impact of Sciences on Society Russell (1976) says:

'To modern educated people, it seems obvious that matters of fact are to be ascertained by observation, not by consulting ancient authorities. But this is an entirely modern conception, which hardly existed before the seventeenth century. Aristotle maintained that women had fewer teeth than men; although he was twice married, it never occurred to him to verify this statement by examining his wives' mouths'.

Social anthropologist Robert Briffault goes to the extent of declaring that modern science was the contribution of the Muslims. Scientific research started with the Greeks, but it were the Muslim Arabs who discovered the scientific method the method of experimentation, observation and measurement. This laid the basis for modern science in Europe. According to Briffault:

'The debt of our science to that of the Arabs does not consist in startling discoveries of revolutionary theories; science owes a great deal more to Arab culture, it owes its existence. The ancient world was, as we know, pre-scientific. The Astronomy and Mathematics of the Greeks were

a foreign importation never thoroughly acclimatized in Greek culture. The Greeks systematized, generalized and theorized, but the patient ways of investigation, the accumulation of positive knowledge, the minute method of science, detailed and prolonged observation and experimental inquiry were altogether alien to the Greek temperament. Only in Hellenistic Alexandria was an approach to scientific work conducted in the ancient classical world. What we call science arose in Europe as a result of a new spirit of inquiry, of new methods of investigation, of the method of experiment, observation, and measurement, of the development of Mathematics in a form unknown to the Greeks. That spirit and those methods were introduced into the European world by the Arabs'.

The Quran places great emphasis on observation and reflection upon all things created in the universe; this is what we today call Science. The methodological practice brings us closer to God. The history of Islam is witness to the fact that Muslims made tremendous progress in scientific knowledge in the beginning. Bertrand Russell explicitly expresses that the Muslims promoted scientific knowledge and education and led the world in science when Europe was still in the Dark Ages. A brilliant Islamic civilization, at that time, flourished from India to Spain. He says:

'Our use of the phrase 'The Dark Ages' to cover the period from 600 to 1000 marks our undue concentration on Western Europe. In China, this period includes the time of the Tang Dynasty, the greatest age of Chinese poetry and in many other ways a most remarkable epoch. From India to Spain the brilliant civilization of Islam flourished. What was lost to Christendom at this time was not lost to civilization, but quite the contrary'.

(Writer is a former SAPM/Minister for Law and Justice and a practicing Barrister and writer: mail@zafarullahkhan.com)